

Attorney Docket 112.P14070

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REMARKS

The present patent application has been reviewed in light of the final office action, referenced above, in which claims 1-2, 4 and 9-18 are rejected under 35 U.S.C. § 103(a) as being anticipated by Boyd et al., U.S. Patent No. 6,166,831 (hereinafter "Boyd") in view of Scott, U.S. Patent No. 6,928,195 (hereinafter "Scott") and in view of Ogasawara, U.S. Patent No. 4,409,625 (hereinafter "Ogasawara"). Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Boyd in view of Scott, Ogasawara and Teeter, U.S. Patent No. 4,451,030 (hereinafter "Teeter"). Claims 5-6 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Boyd in view of Scott, Ogasawara and Shimizu et al., U.S. Patent No. 5,777,308 (hereinafter "Shimizu"). Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Boyd in view of Scott, Ogasawara, Shimizu, and Teeter. Reconsideration of the above-referenced patent application in view of the foregoing amendments and following remarks is respectfully requested.

Claims 1-24 are pending. Claims 1, 5, 9, 11, 13, 15, 17 and 18 have been amended to more clearly delineate intended subject matter. New claims 19-24 have been added. Support for new claims 19-24 may be found throughout the specification. No new matter has been added.

Rejections under 35 U.S.C. § 103(a)

Claims 1-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Boyd, Scott, Ogasawara, Teeter, and Shimizu.

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references

themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." MPEP § 2143. Assignee respectfully submits that the Examiner has not established a *prima facie* case of obviousness. The cited patents do not teach or suggest all the limitations of the aforementioned claims.

For example, none of the Boyd, Scott, Ogasawara, Teeter, and Shimizu patents disclose a plurality of rows of sensors "wherein each row of sensors is spaced apart from each other row of sensors" as claimed in claim 1. Because none of the cited patents disclose this limitation, no combination of the cited patents would yield all of the limitations of independent claim 1. Independent claims 5, 9, 11, 13, 15, and 17 include similar limitations, and therefore no combination of the cited patents would yield all of the limitations of these independent claims and the claims that depend from them. New claims 19-24 also include similar limitations.

Also, in the office action, the Examiner, in discussing the rejections to claims 2 and 10, mentions that "Boyd discloses that the distance between rows of sensors is substantially equal to  $(x/m)+n$  time the width, wherein  $x$  is a positive integer smaller than  $m$ , and  $n$  is an integer equal to or larger than 0 (column 3, lines 9-15 of Boyd)." However, in reading the cited passage from Boyd, it is clear that Boyd is referring to the pitch of pixels within a sensor row, and not at all to any space between rows of sensors. The following includes the passage from Boyd relied upon by the Examiner:

"Yet because the two rows are staggered with respect to each other they can be samples so that they provide a periodicity which is shorter than either  $W_1$  or  $W_2$ . If  $W_1$  and  $W_2$  are equal then the periodicity overall of the combined rows 30 and 32 can be as little as  $W_1/2$ . Thus while the overall length of linear array 18 typically provides a resolution afforded by the periodicity  $W_1$ , with this invention the same length row can provide a resolution of twice that, a resolution normally associated with a linear sensor twice as long." (see Boyd, column 3, lines 7-16)

The terms  $W_1$  and  $W_2$  are introduced in Boyd as follows:

"Typically pixels 34 in row 30 have a spatial periodicity or pitch  $W_1$ . Pixels 36 in row 32 have a periodicity or pitch of  $W_2$ ." (see Boyd, column 2, lines 59-61)

Clearly, the passage relied upon by the Examiner as evidence that Boyd discloses rows of sensors that are spaced apart from each other does not support the Examiner's position. The pitch or spatial periodicity of pixels in a row of sensors has nothing at all to do with any space between rows of sensors. Further, Boyd very clearly and unambiguously discloses that the rows of sensors 30 and 32 taught by Boyd are adjacent to each other:

"Linear array 18, FIG. 2, includes first and second rows 30, 32 which are adjacent to each other and formed of a plurality of longitudinally extending pixels 34, 36." emphasis added (see Boyd, column 2, lines 57-59; see also Figure 2)

The Examiner makes similar assertions in the office action with regard to claims 6, 12, and 14, again relying on the above-quoted passages from Boyd for support for the notion that Boyd teaches a spacing of rows of sensors. However, as noted above, Boyd does not disclose a spacing of rows of sensors, and in fact teaches rows of sensors that are adjacent to each other.

Further, there is no teaching or suggestion to combine the cited patents. Nor would there be any motivation to combine the cited patents. It is well settled that if the "proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) For example, because Scott teaches combining multiple separate images (one image per nutating position) to produce a higher-resolution image, incorporating the teachings of Scott into the system of Boyd, if possible, would yield a system that would result in a document being scanned multiple times in order to produce the higher-resolution image. Moving a document through a scanner multiple times (once for each nutating position) to produce a higher-resolution image would clearly result in a large degradation in scanning speed. Further, the addition of a nutating mirror and associated circuitry would frustrate the stated goal of Boyd to provide a higher-resolution linear array image sensor that is lower in cost (see column 1 line 35-39 of Boyd). For at least these reasons, there is no motivation or suggestion to combine Boyd and Scott.

Because none of the cited patents disclose the above claim elements, and further because there is no suggestion or motivation to combine the patents, claims 1-18 are believed to patentably distinguish from the cited patents. It is, therefore, respectfully requested that the Examiner withdraw the rejection as to these claims.

It is noted that claimed subject matter may be patentably distinguished from the cited patents for additional reasons; however, the foregoing is believed to be sufficient. Likewise, it is noted that the Assignee's failure to comment directly upon any of the positions asserted by the Examiner in the office action does not indicate agreement or acquiescence with those asserted positions.

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CONCLUSION

In view of the foregoing, it is respectfully asserted that all of the claims pending in the present patent application are in condition for allowance. If the Examiner has any questions, he is invited to contact the undersigned at (503) 439-6500.

Reconsideration of the present patent application and early allowance of all the claims is respectfully requested. Please charge any underpayments or credit any overpayments to deposit account no. 50-3703.

Respectfully submitted,

Dated: 1/16/07

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